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# **Why are some firms more internationally committed than others? The role of knowledge, firm development stage, and optimism**

Dirk De Clercq  
Niels Bosma

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address: Italiëlaan 33  
mail address: P.O. Box 7001  
2701 AA Zoetermeer  
telephone: + 31 79 343 02 00  
telefax: + 31 79 343 02 01  
website: [www.eim.nl](http://www.eim.nl)

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## **WHY ARE SOME FIRMS MORE INTERNATIONALLY COMMITTED THAN OTHERS? THE ROLE OF KNOWLEDGE, FIRM DEVELOPMENT STAGE, AND OPTIMISM<sup>1</sup>**

Dirk De Clercq, Ghent University & Vlerick Leuven Gent Management School  
Niels Bosma, EIM Business & Policy Research

### **ABSTRACT**

In this study we use a unique data set to examine factors related to international commitment of owner-managed firms. We draw on different streams of research – such as the knowledge-based view, the stage theory of internationalization and the new venture theory of internationalization – to study firms' involvement in foreign markets. Our results suggest that knowledge-based resources embedded in the management team and the firms' attitude towards innovation increase international commitment. Further, consistent with the stage theory of internationalization, we find that firms demonstrate a pattern of steadily increasing foreign commitment. However, this latter finding was obtained only after taking into account the firms' optimism in terms of future growth. Optimism among start-ups therefore may obscure the relationship between firm development stage on the one hand and international commitment on the other.

### **INTRODUCTION**

An implicit assumption in the research on firm internationalization is that the crossing of national borders matters in terms of how firms grow and perform (Buckley & Gharui, 1993). The literature in the domain of international entrepreneurship assumes that there are aspects unique to the internationalization process of new ventures, and, therefore, that it is of interest to examine how young firms commit themselves to international activities (McDougall & Oviatt, 2000). Traditionally, research has paid relatively more attention to the international activities of established firms rather than emerging firms (e.g., Aharoni, 1966; Zaheer & Mosakowski, 1997). International activities are sometimes believed to be not so common among young ventures as these ventures often appear to focus on the local domestic market (Acs et al., 1997). For instance, it has been argued that the lack of financial, human and informational resources may restrict new ventures' moves towards international markets (Johanson & Vahlne, 1990). However, with increasing global competition, falling barriers to international trade, and improved international communication networks, many new ventures may be pushed to compete in international markets (McDougall, Shane, & Oviatt, 1994; Oviatt & McDougall, 1994). Further, for firms in countries with relatively small domestic markets, commitment to international markets could be essential, if not just desirable, for the firm's survival and success (Autio, Sapienza & Almeida, 2000; Johanson & Vahlne, 1990).

For firms planning to be involved in international activities, the entry mode chosen as regards to internationalization may reflect the potential for new opportunities and viability (Acs et al., 1997; Burpitt & Rondinelli, 2000). In general, firms can choose to limit their foreign commitment to export and import activities, to adopt various contractual modes (e.g., licensing, joint ventures), or to undertake foreign direct investment (in wholly-owned subsidiaries or branch offices) (Eriksson et al., 1997; Johanson & Vahlne, 1977; 1990). These entry modes reflect different levels of resource commitment, extent of risk, and degree of control (Eriksson et al., 1997; Johanson & Vahlne, 1977; Root, 1987). In the context of this paper, we wish to examine various factors that are related to the level of international commitment among owner-managed firms.

More specifically, we use an integrative approach to explain international commitment among (nascent and existing) owner-managed firms. International commitment is defined as the extent to which the firm chooses for entry modes with high resource commitments (e.g., own foreign establishment, joint ventures) versus low resource commitments (e.g., export, import). Our primary framework combines the knowledge-based view (Cohen & Levinthal 1990; Grant, 1996), the stage theory of internationalization (Johanson & Vahlne, 1977; 1990), new venture theory of internationalization (McDougall & Oviatt, 2000), and prior work on growth and over-confidence (Penrose, 1959; Busenitz & Barney, 1997).

First, we examine the effect of knowledge-based factors (such as the firm's human capital and innovation) on international commitment. Second, we test how the firm's development stage affects the level of international commitment. We hereby compare two competing theoretical streams of research: (1) the stage theory of internationalization<sup>2</sup> (Eriksson et al., 1997; Johanson & Vahlne, 1977; 1990) which posits that firms increase their commitment to international activities through a developmental and sequential process, and (2) the new venture theory of internationalization (McDougall et al., 1994; McDougall & Oviatt, 1996; McDougall & Oviatt, 2000; Oviatt & McDougall, 1997) which argues that new firms may engage early on in extensive international commitment, and thus not follow the subsequent stages. Third, we examine the effect of optimism on the level of international commitment and test to what extent optimism among emerging firms affects the strength of the relationship between the firm's development stage and its international commitment (Busenitz & Barney, 1997).

We draw our analysis on a set of nascent and existing owner-managed firms located in Belgium or the Netherlands. As with prior research on firm internationalization in small European countries (e.g., Autio et al., 2000; Johanson & Vahlne 1977), these two countries provide an interesting setting in which to examine internationalization in that cross-border activity is often a necessity given the limited domestic market size, yet many firms still avoid starting or expanding international activities for a significant period of time (Autio et al., 2000; Eriksson et al., 1997). Our data set is unique in that our sample includes nascent as well as existing firms, and represents a representative portion of the adult population of the respective countries.

## **THEORY AND HYPOTHESES**

### **Knowledge-based resources**

In this section we examine how the firm's current knowledge base (i.e., entrepreneur's educational level and the size of the management team) and its focus on knowledge renewal (i.e., innovation) affect the level of international commitment. Prior research has argued that new firms are subject to a liability of newness, because of their lack of legitimacy in convincing other business entities to provide the necessary resources for growth and expansion (Stinchcombe, 1965). This liability may be in particular strong for firms that lack the necessary human capital in their management team (Cooper et al., 1994). Prior research has described the importance of new firms' management team for their strategic decision making and success (Hambrick et al., 1996). In the context of our study, the members of the management team may be the primary source for knowledge and capabilities necessary to undertake substantial international activities (Cohen & Levinthal, 1990; Grant, 1996).

A new venture's human capital resides to a great extent in the skills and capabilities of the lead *entrepreneur* (Gartner et al. 1999). That is, the overall capabilities of the entrepreneur are an important source of competencies for the new venture, and can contribute to the venture's survival and growth (Cooper et al., 1994). For instance, numerous studies have linked the

education level of the entrepreneur to early-stage business performance (Blanchflower & Oswald 1998). In the context of our study, we believe that the entrepreneur's overall human capital will have a positive effect on the dedication to international activities. Our arguments for the positive relationship between the entrepreneur's human capital and international commitment are drawn from the literature on self-efficacy (Bandura 1977; 1978). The idea behind the concept of self-efficacy implicitly assumes that those individuals who are better educated and invest more resources in honing their overall skills will believe that they are better able to secure benefits through knowledge-based activities such as making strong international commitments. For instance, Westhead (1995) suggested that firms owned by founders who have been awarded a higher educational degree may have higher expectations about potential returns from international activities and also be more aware of business opportunities in foreign markets.

We thus suggest that high international commitment, as a knowledge-intensive activity, will be more likely to occur when one has gained overall capabilities – e.g., through general training and education programs – that are perceived as being important to successfully engage in such international commitment:

*Hypothesis 1: The entrepreneur's education level is positively related to his/her firm's international commitment.*

Further, the literature suggests that the skills and competencies of the entrepreneurial *team* can be regarded to be a key factor influencing firm decision making and success (Chandler & Hanks, 1994). Some new and small firms are established and owned by more than one individual. Compared to single-founder firms, firms with more partners are able to draw upon wider social and business networks (Lipparini & Sobrero, 1994) and may be able to accumulate a wider variety of knowledge (Grant, 1996). We reason that firms with larger teams are more likely to have access to resources and knowledge relevant to internationalization compared to firms with smaller teams (Grant, 1996). In emergent firms the team members are commonly seen as making the difference between success or failure (Chandler & Jansen, 1992), and one can see that most of the decisions with regard to international business activities are centralized around these persons. Since international activities demand large amounts of knowledge and resources, small teams may be constrained in their intentions to make substantial commitments to foreign markets. Similarly, Reuber and Fischer (1997) reasoned that the knowledge and experience of a firm's management team reflects a critical resource for a firm's early exporting and internationalization activities.

In sum, we hypothesize that firms with larger management teams are more likely to hold knowledge that allows for making substantial commitments to international activities compared to firms with smaller teams. Therefore, we hypothesize:

*Hypothesis 2: The firm's team size is positively related to its international commitment.*

We also argue for a positive relationship between a firm's level of innovation and its international commitment. Several reasons can be given for this positive relationship. First, whereas the production base of innovative firms may be localized, the potential market for these firms' products may be much wider than is the case for less innovative firms (Autio et al., 2000). For instance, technology-driven firms may be working on scientific and technological developments that have potential for generic changes in the international market arena (Oakey, 1993). High-tech firms may thus possess a technological-based global market advantage, and therefore gain from making substantial international commitments. For instance, in their study of small and medium-sized technology-based firms, Karagozoglu and Lindell (1998) reasoned that innovative

enterprises were more likely to export because global market opportunities were more promising than domestic ones.

Another argument for the positive relationship between innovation and international commitment is that a firm that attempts to gain a competitive advantage through knowledge renewal and innovation often has to maneuver rapidly in order to avoid competitive moves (Autio et al., 2000). Since many innovations are subject to potential imitation, firms use different mechanisms to delay this imitation process, e.g. through patent protection. However, an alternative to gain competitive advantage for innovative firms is to engage in substantial international activity. For instance, Franko (1989) argued and found that a firm's R&D spending – as a proxy for innovation – is positively related to the firm's global market share. The reasoning is that firms with a focus on innovation may be highly motivated to make high international commitments because these commitments allow to anticipate competitive responses and to quickly build market share across the world.

Based on the above, we argue for a positive relationship between a firm's level of innovation and its commitment to international activities.

*Hypothesis 3: The firm's level of innovation is positively related to its international commitment.*

### **Development stage of the firm**

The knowledge that is present within the firm may also depend indirectly on the time that the firm has been in existence. Prior research has put forward different theoretical models to explain firms' commitment to foreign markets. One of the most popular views in the literature is the stage theory of internationalization (Johanson & Vahlne, 1977; 1990). According to this view firms increase their commitment to international activities through a developmental and sequential process. That is, firms make incremental commitments towards international activities: they start off with activities that involve less risk and more control (e.g., export, import) before engaging in more substantial commitment (e.g., joint ventures, own branch office) (Eriksson et al., 1997; Johanson & Vahlne, 1977; 1990). Thus, stage theory suggests that firms undertake international activity incrementally through subsequent phases of commitment (Barkema et al., 1996; Eriksson et al.; Johanson & Vahlne, 1977; 1990). The reasoning is that incremental efforts build knowledge and confidence, which may lead to further commitment.

In short, according to the stage theory, international commitment develops as an outgrowth of a firm's success in prior stages in the internationalization process. In other words, the experience gained in a limited set of foreign activities (e.g., export and import) may allow a firm to make more substantial investments in more risky international undertakings (e.g., making a joint venture with a foreign partner or establishing an own foreign establishment) (Johanson & Vahlne, 1977, 1990). As result, from this theoretical perspective one would expect a positive relationship between a firm's development stage and its international commitment.

*Hypothesis 4a: The firm's development stage is positively related to its international commitment.*

Some researchers have questioned the stage theory of internationalization, and proposed that young firms that choose to internationalize do not always progress through incremental stages. For instance, Oviatt and McDougall (1997) and McDougall et al. (1994) argued – and empirically found – that some firms show substantial international commitment at inception. These

proponents of the ‘new venture theory of internationalization’ explained that being ‘international at founding’ may in part be due to advances in international information exchange, and the growing trend by entrepreneurs to view markets internationally rather than domestically. That is, as entrepreneurs’ views toward internationalization change and barriers to international trade are reduced, decisions may be made early on to devote substantial resources to foreign activity.

In short, according to the new venture theory of internationalization, firms may circumvent, skip, or compress stages in the internationalization process to the point that these stages are not categories that need to be gone through in subsequent phases (McDougall et al., 1994; Sullivan & Bauerschmidt, 1990). If the arguments underpinning this view were correct, one would expect the *absence* of a relationship between a firm’s development stage and its level of international commitment.

Empirically, the research on the relationship between firm development stage and its international commitment is mixed. For instance, prior research has looked at the relationship between firm age and the propensity for a firm to be exporter. Whereas it has been found that older firms are more likely to be exporters (Westhead, 1995), other studies showed no significant relationship between firm age and the propensity to export (e.g., Oviatt & McDougall, 1997; Reuber & Fisher, 1997). Since the validity of the stage theory of internationalization has been questioned in particular for the case of emerging firms (McDougall et al., 1994; Shane, & Oviatt, 1994; Oviatt & McDougall, 1997), we develop a competing hypothesis to Hypothesis 4a:

*Hypothesis 4b: The firm’s development stage is not related to its international commitment.*

### **Optimism and growth expectation**

We further extend the literature on firm internationalization by examining the effect of ‘optimism,’ reflected in the firm’s attitude towards growth, on international commitment. Prior research has addressed the role of managerial attitudes in explaining international intensity. Some have argued that individuals’ attitudes are the single most important driver for international activities (Calof & Beamish, 1994). This may be particularly true for ventures in the earliest stages of development where the co-founders have a disproportionately large impact on overall firm activities (Chandler & Hanks, 1994; McDougall et al., 1994). Given the numerous hurdles related to pursuing substantial international activities (e.g., language differences, currency fluctuations, varying government regulations, etc.), the orientation of the entrepreneurs in terms of where they are heading with their venture sets a foundation for the direction of the firm. If this attitude is not established early on, the path-dependent nature of business decisions may make it difficult to develop international capabilities at a later date (Autio et al., 2000; McDougall et al., 1994). Thus, fundamental attitudes vis-à-vis the future goals of the venture are likely to play an important role in determining how committed firms are to foreign markets.

One of the attitudes related to future goals pertains to how rapidly the venture intends to grow internally (Davidsson, 1991; Penrose, 1959) and thus how many jobs are created. We reason that the firm’s willingness to create jobs and gain in critical mass may reflect its propensity to undertake a continuous search for opportunities, especially opportunities that do not pertain to the firm’s current activities – such as new foreign opportunities (Lumpkin & Dess, 1996). Furthermore, all else being equal, firms that intend to create a high number of jobs, may be in better position to take advantage of future foreign opportunities based on their expanded base of human capital (Cooper et al., 1994), and therefore be more willing to make investments that offer the potential to act upon such opportunities.

As result, we argue for a positive relationship between a firm's optimism (in terms of future job creation) and international commitment.

*Hypothesis 5: The firm's optimism is positively related to its international commitment.*

Prior research has also argued that some individuals may be 'too optimistic' in that they show high levels of overconfidence (e.g., Yates et al., 1998). For instance, Busenitz and Barney (1997) found that compared to managers, entrepreneurs exhibit a higher level of overconfidence bias in their decision making behavior. Also, Van Gelderen et al. (2003) found that 'optimistic' nascent entrepreneurs fail in setting up their business more often than their counterparts, and they pointed to the occurrence of potential over-optimism among the so-called 'dreaming' nascent entrepreneurs.

In the context of our study, the presence of over-optimism bias can influence the way that starting entrepreneurs envision their future in terms of job creation and involvement in international activities. Consistent with Van Gelderen et al. (2003), we contend that (over-) optimism may be particularly strong among nascent entrepreneurs. That is, among emerging firms that hold high aspirations in terms of international commitment, these aspirations may often be built on unrealistic goals in terms of future growth. We argue then that the relationship between the firm's development stage and its international commitment will be affected in important ways by the firm's optimism about future growth, i.e., we reason that over-optimism among nascent entrepreneurs may mask the true effect between firm development stage and international commitment. More specifically, we argue that when the possibility of optimism is taken into account, the 'masking effect' of potential over-optimism among nascent entrepreneurs will disappear, and the relationship between firm development stage and international commitment will be stronger.

*Hypothesis 6: The relationship between the firm's development stage and its international commitment is moderated by the level of optimism in that the relationship is stronger for higher levels of optimism.*

## METHODS

### Sample

We based our analysis on a representative sample of the adult population from two countries, Belgium and the Netherlands. Although the focus of this study is not on making cross-country comparisons in terms of the determinants of international commitment, we decided to pool data from two – relatively similar – countries within Europe. More specifically, we used a representative sample of the population of Belgium (N = 2184) and the Netherlands (N = 3505). The data were collected as part of the 2003 Global Entrepreneurship Monitor. Telephone interviews were conducted during the Summer of 2003 with the 5689 respondents using a standardized questionnaire translated from English into the native language(s) of each country (i.e., Dutch and French for Belgium; Dutch for the Netherlands). The interviews were undertaken by private market survey firms.

The data used for this paper pertain to a selected group of variables collected through these phone surveys with those respondents (1) who were between 18 and 64 years old and (2) who were identified as being the (future) owner-manager of a 'nascent,' 'young' or 'established' firm. We will discuss the selection criteria used for classifying the respondents to one of these categories in



the next section when we explain how we measured the ‘firm development stage’ variable. Our final sample consisted of 324 entrepreneurs: 117 for Belgium and 207 for the Netherlands.

## Measures

*International commitment* was assessed by asking the entrepreneurs about the modes of entry they were planning to choose (for the ‘nascent firms’) or had chosen (for the ‘young firms’ and ‘established firms’) when engaging in international activities. More specifically, we distinguished between categories of increasing commitment based on prior research on the internationalization process (e.g., Eriksson et al., 1997; Johanson & Vahlne, 1977; 1990). That is, the respondents could mark one or more of the following categories: (1) no foreign commitment, (2) export, (3) import, (4) licenses abroad, (5) detachment of personnel abroad, (6) international joint venture, and (7) international branch office. We merged the categories (2) and (3) into one category (as it appeared that the majority of the respondents marking export also marked import, and vice versa), as well as the categories (4) to (6). The respondents were assigned to one of these categories depending on the *highest* category they marked. We thus ended up with a variable ranging from one to four. This variable has an ordinal character, therefore we cannot address the magnitude of *differences* in the levels of international commitment. In addition, our dependent variable is skewed in that many firms were not planning to make an international commitment (for the ‘nascent firms’) or had not made an international commitment yet (for the ‘young firms’ and ‘established firms’). This finding confirms prior arguments that even in countries with a small domestic market size, many firms still avoid starting or expanding international activities for a significant period of time (Autio et al., 2000; Eriksson et al., 1997). Given the ordinal nature and the skewed distribution of the international commitment variable, we tested our hypotheses using an *ordinal* regression analysis, rather than an ordinary linear regression analysis.

*Education:* We measured the entrepreneurs’ overall educational attainment by having them indicate their highest educational degree: (1) some secondary degree, (2) secondary degree, or (3) post secondary degree.

*Team size* was assessed by asking the (future) owner-managers how many people, including themselves, would be owning and managing the business (for the nascent firms) or were currently owning and managing the business (for the young and established firms). This variable ranges from one to ten.

*Innovation* was measured by asking the (future) owner-managers how many of their (potential) customers considered the firms’ product or service new and unfamiliar. The respondents could choose between three categories: (1) not new to any customers, (2) new to some customers, or (3) new to all customers. A value ranging from one to three was assigned to the three corresponding categories. As a validity check, we calculated the correlation coefficient between our innovation variable and an additional question included in the survey: ‘Right now, are there many, few, or no other businesses offering the same products or services to your (potential) customers?’ We found a significant positive correlation ( $r = .177$ ;  $p < .001$ ).

*Firm development stage* was measured by assessing whether the owner-managers belonged to one of the following categories: (1) nascent firms, (2) young firms or (3) established firms. The respondents were categorized as belonging to a ‘nascent firm’ when they were involved in concrete activities to start up a new business without having paid salaries for more than three months. The respondents were categorized as belonging to a ‘young firm’ when they were owning and managing a business that was between 3 and 42 months old. The respondents were categorized as belonging to an ‘established firm’ when they were owning and managing a

business that was more than 42 months old. The entrepreneurs were given a value from one to three according to which of the three categories they belonged to.

*Optimism* was assessed by asking the respondents two questions: (a) 'Right now, how many people, not counting the owners but including exclusive subcontractors, are working for this business?' (b) 'Five years from now, how many people, not counting the owners but including all exclusive subcontractors, will be working for this business?' For both questions, the answers were given a value ranging from one to four corresponding to one of the following four categories: (1) no jobs, (2) 1-5 jobs, (3) 6-19 jobs, and (4) 20 or more jobs. We calculated the 'optimism' variable by subtracting the two values. As a result, the intended job growth could take on five possible values, i.e., ranging from 'minus two' up to 'two.' For consistency reasons, we made a transformation so that our final measure ranged between 'one' and 'five.'

It is interesting to note that we found a high and negative correlation between firm development stage and optimism ( $r = -.47$ ;  $p < .01$ ), which supports our assertion that optimism is particularly present among nascent entrepreneurs. We also found that optimism is positively correlated with international commitment ( $r = .28$ ;  $p < .01$ ).<sup>3</sup>

We further included six control variables in our model in order to check whether our hypothesized predictors affect international commitment beyond the impact of these controls. Whereas *age*, *gender*, *industry* and *country* are straightforward, two other controls deserve some more attention. *Current employment size* was measured by assigning the firms to the following four categories: (1) no jobs, (2) 1-5 jobs, (3) 6-19 jobs, and (4) 20 or more jobs. This variable ranges from one to four. *Customer dispersion* was measured by asking the (future) owner-managers what proportion of their customers (will) have more than one hour of normal ground travel (by foot, bicycle, personal auto or public transportation) to get to their business. The respondents could choose between seven categories: (1) none, (2) 10% or less, (3) 11-25%, (4) 26-50%, (5) 51-75%, (6) 76-90%, or (7) more than 90%. A value ranging from one to seven was assigned to the seven corresponding categories.

## RESULTS

The regression results are presented in Table 1. As mentioned earlier, we tested our hypotheses using ordinal regression analyses. Model I includes only the control variables. It can be seen that males show higher international commitment than females ( $p < .01$ ). Further, we found that the level of customer dispersion is positively related to international commitment ( $p < .01$ ). Also, all else being equal, Belgian firms choose for more committed entry modes compared to the Dutch firms ( $p < .05$ ).

(insert Table 1 about here)

Model II includes the three knowledge-based factors (Hypotheses 1 to 3). We found support for the effect of two of the three knowledge-related variables. Firms with bigger teams are more likely to show high international commitment (Hypothesis 2 strongly supported;  $p < .01$ ), and more innovative firms are more committed to foreign markets (Hypothesis 3 strongly supported;  $p < .01$ ). However, we did not find support for a positive relationship between the entrepreneur's educational level and international commitment (Hypothesis 1 not supported).

In Model III we added 'firm development stage' to the model. It can be seen that there is no significant relationship between firm development stage and international commitment, which would support the arguments for the new venture theory of internationalization (Hypothesis 4b)

rather than the stage theory of internationalization (Hypothesis 4a). In order to further assess the nature of the relationship between firm development stage and international commitment, we also added 'optimism' to the equation (Model IV). First, it can be seen that the firm's optimism positively affects international commitment ( $p < .01$ ). In other words, we found strong support for Hypothesis 5. Furthermore, we found that the relationship between firm development stage and international commitment becomes significant when the effect of optimism is taken into account (Model IV; Hypothesis 4a supported).

In order to more explicitly assess the potential interaction effect between firm development stage and international commitment, we ran two additional models. Model V is a minor adjustment to model IV in the sense that the firm development stage variable has been coded as a categorical rather than interval variable. It can be seen that, consistent with Hypothesis 4a, the nascent firms and young firms are less internationally committed compared to the established firms. In model VI the interaction effect between firm development stage and optimism is shown. Contrary to Hypothesis 6, we did not find an interaction effect between firm development stage and optimism.

## DISCUSSION

In this study, we examined how knowledge-based factors (education, team size, innovation), firm development stage and optimism (i.e., expected job growth) are related to a firm's commitment to the international market place. We found that (1) team size and innovation are positively related to international commitment, (2) firm development stage is *not* related to international commitment when the firm's optimism is *not* taken into account, (3) firm development stage positively affects international commitment when also including the firm's optimism, and (4) optimism by itself positively affects the level of international commitment.

The lack of a relationship between firm development stage and international commitment, when not controlling for optimism, is in line with theoretical reasoning and empirical analyses by various researchers (e.g., Oviatt and McDougall; 1994; Reuber & Fisher, 1997) who questioned the logic underlying the stage view on the internationalization process. This result would support the new venture theory of internationalization which posits that many young firms make substantial foreign commitments from the very outset in order to gain competitive credibility.

The interesting bit in our results, however, is that the *absence* of a relationship between firm development stage and international commitment may be caused by the masking effect of the firm's optimism. That is, the relationship between firm development stage and international commitment *becomes* significant, and positive, when taking into account optimism. This optimism may be particularly strong among nascent firms (Van Gelderen et al., 2003). That is, nascent firms may indicate particularly strong growth aspirations that indirectly make these firms more inclined to engage in high international commitment. This conclusion is further supported by the following observations.<sup>3</sup> First, the correlation coefficient between firm development stage and international commitment equals  $-0.04$  (not significant), while the correlation coefficient between firm development stage and optimism equals  $-0.47$  ( $p < .01$ , indicating high optimism among nascent entrepreneurs). Second, the *partial* correlation coefficient between firm development stage and international commitment, controlling for optimism equals  $0.09$  and is – weakly – significant ( $p < 0.10$ ). Thus, when taking into account the effect of the firms' growth aspirations, nascent firms appear to show *less* international commitment compared to their established counterparts (which is consistent with the arguments underlying the stage theory of internationalization). Our research design does not allow to assess whether the expectations among nascent entrepreneurs in terms of future jobs are realistic, or whether these expectations

represent over-optimism. Future longitudinal research is necessary to examine to what extent the ambitious nascent entrepreneurs in our sample are able to actually fulfill their objectives both in terms of job creation and international commitment.

In terms of the effect of our three knowledge-based factors, the positive relationship between team size and international commitment may be explained by the fact that the breadth of knowledge available in the management team can diminish the uncertainty related to international expansion. (Grant, 1996; Oviatt and McDougall, 1994). Our results indicate that ventures with access to a wider set of knowledge-based resources will be more internationally intense than those who have no access to such knowledge. We realize that our 'team size' variable is only a crude proxy for the amount of knowledge embedded in the firm's management team. More fine-grained operationalizations should be used in future research by looking explicitly at, e.g., the amount and scope of international know-how present within the management team. Similarly, future research should look more carefully at the type of educational background when studying antecedents of international commitment, e.g., the number of years studied at foreign institutions. The lack of an effect of our education variable on international commitment may be explained by the fact that 'highest educational degree' is a too crude proxy for the level of skills relevant to internationalization.

Finally, the positive relationship between innovation and international commitment reflects the potential that is embedded in firms who continuously question the existing knowledge base (Autio et al., 2000). Our results indicate that efforts aimed at searching for new solutions of existing problems may create a motivation to leverage these solutions in foreign markets. Knowledge renewal may motivate the firm, for instance, to compete internationally by investing in large-scale projects worldwide. Also, when highly committed efforts are undertaken in the international market place (e.g., setting up an own foreign establishment), the innovative know-how can be used to bring these efforts to a successful end. In sum, we reason that innovative firms may undertake high international commitments since they anticipate a potential foreign market advantage.

## **LIMITATIONS, FUTURE RESEARCH AND IMPLICATIONS**

It is important to point to some limitations of our study. First, although the rationale for our hypotheses assumed causal relationships, we used a cross-sectional design to examine the relationship between our predictor variables and the level of international commitment. One could argue, however, that firms that decide to undertake substantial foreign investments are forced to make subsequent hiring decisions in terms of the size of the management team. Also, a more intensive presence in the international market arena may lead to, rather than be the result of, optimism in terms of future growth. Although the argumentation for the direction of our hypotheses was based on existing theory, future researchers should focus on collecting data on knowledge-based factors and expansion measures on the one hand and commitment to international activities on the other at *different* points in time, in order to clarify the causality underlying our hypotheses. Another limitation of our study is that many of the firms in our sample were still in the process of being set up at the time of the data collection (i.e., the nascent firms). Although the inclusion of these nascent firms allowed for the investigation of a wider set of ventures *and* for a more detailed analysis of the effect of optimism, future research, as we mentioned earlier, should follow-up these firms to see whether they are persistent in their efforts and (possibly over-ambitious) intentions to engage in substantial international activity.

Further, although the focus of our study was not on making comparative analyses across different environmental contexts, an interesting result was that the Belgian respondents were more likely to

be involved in firms with high international commitment compared to their Dutch counterparts. Future research could include a wider set of countries and examine the interaction effect between our predictor variables and the country in which the firms are based. This could allow to examine how cultural factors (e.g., acceptance of uncertainty; social norms) or other factors (e.g., level of foreign direct investment in the domestic market; size of the domestic market) affect the extent to which a country's firms make international commitments.

An important implication of this paper may be that constraints that hinder the investment in substantial foreign activity may partly be explained by knowledge-related factors. For instance, when the amount of knowledge relevant for international activity is very limited, the potential for successful foreign investments is hampered. Therefore, it may be useful for an entrepreneur to attract a variety of managers from the outset in order to be able to engage in substantial foreign activity. Furthermore, the results of this study should help entrepreneurs to identify one particular advantage related to choosing an innovative market approach. More specifically, the level of innovation may play an important role in differentiating a venture's competitive position in terms of achieving speedy international entry and a global competitive advantage. Finally, our results indicate that emerging firms may be the victim of over-optimism in terms of their future goals. Additional investigation is needed in this regard, especially in separating 'dreamers' from truly high-potential entrepreneurs, and it may be beneficial to take into account financing issues as well. For instance, Van Gelderen et al., (2003) found that nascent entrepreneurs requiring high amounts of start-up capital were less successful in setting up their businesses. However, once started, the level of start-up capital was positively associated with venture performance. Therefore, early-stage investors may play an important role in filtering the over-optimistic entrepreneurs from the 'real' high potentials.

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## NOTES

<sup>1</sup> The authors would like to thank Per Davidsson for his insightful comments on an earlier version of this paper.

<sup>2</sup> It is important to note that the term 'stage' has two different meanings in the context of our paper. In terms of the firm's development *stage*, it pertains to the extent that the firm is in the process of being set up ('nascent firm'), has been set up but is still relatively young ('young firm') or has been around for some years ('established firm'). In the *stage* theory of internationalization, the notion of 'stage' pertains to the progress that the firm has made in the internationalization process.

<sup>3</sup> The descriptive statistics for the variables (together with the bi-variate correlation coefficients) are not included in the present version due to space constraints. They are available on request.

**CONTACT:** Dirk De Clercq; Vlerick Leuven Gent Management School, Reep 1, 9000 Gent; (T) +32 9 210 98 16; (F) +32 9 210 97 00;





Table 1:  
Regression results

Dependent variable: international commitment (4 categories)	I	II	III	IV	V	VI
H1: Education		0.14 <sup>**</sup>	0.15	0.17	0.18	0.23
H2: Team size		<b>0.21<sup>**</sup></b>	<b>0.21<sup>**</sup></b>	<b>0.14<sup>+</sup></b>	<b>0.13<sup>+</sup></b>	0.11
H3: Innovation		<b>0.50<sup>**</sup></b>	<b>0.51<sup>**</sup></b>	<b>0.44<sup>**</sup></b>	<b>0.43<sup>**</sup></b>	<b>0.39<sup>*</sup></b>
H4: Firm development stage			0.07	<b>0.47<sup>**</sup></b>		
stage: nascent <sup>1</sup>					<b>-0.82<sup>*</sup></b>	<b>-1.27<sup>**</sup></b>
stage: young firm					<b>-0.81<sup>*</sup></b>	<b>-0.50<sup>*</sup></b>
H5 & H6: Optimism (exp job growth)				<b>0.95<sup>**</sup></b>	<b>0.94<sup>**</sup></b>	<b>0.79<sup>*</sup></b>
optimism x nascent <sup>1</sup>						0.46
optimism x young firm						-0.68
Entrepreneur's age	-0.63	-0.50	-0.58	-0.43	-0.63	-0.39
Entrepreneur's gender: female	<b>-0.51<sup>*</sup></b>	<b>-0.58<sup>*</sup></b>	<b>-0.59<sup>*</sup></b>	-0.44	-0.42	-0.44
Current employment size	0.09	0.01	-0.01	<b>0.29<sup>+</sup></b>	<b>0.33<sup>+</sup></b>	<b>0.29<sup>+</sup></b>
Customer dispersion	<b>0.22<sup>**</sup></b>	<b>0.19<sup>**</sup></b>	<b>0.19<sup>**</sup></b>	<b>0.20<sup>**</sup></b>	<b>0.21<sup>**</sup></b>	<b>0.21<sup>**</sup></b>
Industry: transforming <sup>2</sup>	0.28	0.45	0.42	0.36	0.38	0.41
Industry: business services	-0.03	-0.08	-0.11	-0.39	-0.37	-0.39
Industry: consumer oriented	0.42	<b>0.55<sup>+</sup></b>	<b>0.53<sup>+</sup></b>	0.29	0.32	0.37
Country: Netherlands	<b>-0.50<sup>*</sup></b>	<b>-0.44<sup>+</sup></b>	<b>-0.46<sup>+</sup></b>	<b>-0.63<sup>*</sup></b>	<b>-0.60<sup>*</sup></b>	<b>-0.56<sup>*</sup></b>
Nagelkerke $R^2$	0.102	0.160	0.160	0.240	0.245	0.262

Ordinal regression; \*\* p [two-tailed]  $\leq .01$ , \* p [two-tailed]  $\leq .05$ ; + p [two-tailed]  $\leq .10$

<sup>1</sup> Established firms used as base case

<sup>2</sup> Industry category 'extractive' used as base case